

WHAT IS CLAIMED IS:

1. An isolated polynucleotide comprising a member selected from the group consisting of:

(a) a polynucleotide having at least a 70% identity to a polynucleotide encoding an enzyme comprising amino acid sequences set forth in SEQ ID NO:4;

(b) a polynucleotide which is complementary to the polynucleotide of (a); and

(c) a polynucleotide comprising at least 15 bases of the polynucleotide of (a) or (b).

2. The polynucleotide of Claim 1 wherein the polynucleotide is DNA.

3. The polynucleotide of Claim 1 wherein the polynucleotide is RNA.

4. The polynucleotide of Claim 2 which encodes an enzyme comprising amino acids 1 to 364 of SEQ ID NO:4.

5. An isolated polynucleotide comprising a member selected from the group consisting of:

(a) a polynucleotide having at least a 70% identity to a polynucleotide encoding an enzyme encoded by the DNA contained in ATCC Deposit No. _____, wherein said enzyme is AEDM12RA- α -gal-18GC;

(b) a polynucleotide complementary to the polynucleotide of (a); and

(c) a polynucleotide comprising at least 15 bases of the polynucleotide of (a) and (b).

6. A vector comprising the DNA of Claim 2.

7. A host cell comprising the vector of Claim 6.

8. A process for producing a polypeptide comprising ~~6~~ expressing from the host cell of Claim ~~1~~⁷ a polypeptide encoded by said DNA.

a *sub D3*
a 9. A process for producing a cell comprising ~~6~~ transforming or transfecting the cell with the vector of Claim ~~1~~⁶ such that the cell expresses the polypeptide encoded by the DNA contained in the vector.

10. An enzyme comprising a member selected from the group consisting of:

- (a) an enzyme comprising an amino acid sequence which is at least 70% identical to the amino acid sequence set forth in SEQ ID NO:4; and
- (b) an enzyme which comprises at least 30 amino acid residues to the enzyme of (a).

11. An enzyme comprising a member selected from the group consisting of:

- (a) an enzyme comprising an amino acid sequence as set forth in in SEQ ID NO:4; and
- (b) an enzyme which comprises at least 30 amino acid residues to the enzyme of (a).

12. A method for hydrolyzing α -galactose bonds comprising:
administering an effective amount of an enzyme having the amino acid sequence set forth in SEQ ID NO:4.

add a2

add B5